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FAIRCHILD SEMICONDUCTOR CORPORATION

UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

ALPHA & OMEGA SEMICONDUCTOR,
INC., a California corporation; and
ALPHA & OMEGA SEMICONDUCTOR,
LTD., a Bermuda corporation,

Plaintiffs and Counterdefendants,

v.

FAIRCHILD SEMICONDUCTOR
CORP., a Delaware corporation,

Defendant and Counterclaimant.

Case No. C 07-2638 JSW (EDL)
(Consolidated with Case No. C 07-2664 JSW)

**FAIRCHILD SEMICONDUCTOR
CORPORATION'S MEMORANDUM IN
OPPOSITION TO PLAINTIFF'S
MOTION TO COMPEL RESPONSES TO
INTERROGATORIES AND
PRODUCTION OF DOCUMENTS**

Date: December 18, 2007
Time: 9:00 a.m.
Ctroom: Courtroom E, 15th Floor
Judge: Hon. Elizabeth D. Laporte

AND RELATED COUNTERCLAIMS.

I. INTRODUCTION

Alpha and Omega Semiconductor, Inc.'s, ("AOS") proposed definition of "Accused Fairchild Devices" on its face covers **every** power trench MOSFET device manufactured by Fairchild, based on subpart (b) of the definition. Under the most charitable view of AOS's infringement theories, to the extent any such theories may be gleaned from AOS's PICS, only a small subset of Fairchild's trench design products are relevant to AOS's asserted patent claims. Fairchild manufactures thousands of products that include a power trench MOSFET. It would be a monumental and costly burden for Fairchild to provide discovery regarding products that have absolutely no relevance to AOS's patents under any interpretation of the claims. AOS's definition is also unclear and confusing. For example, it purports to cover "power MOSFET-based devices." There is no commonly understood meaning for this phrase, which appears to be intended to cover devices "based" on a power MOSFET, whatever that means, and AOS has refused to limit this definition to devices that "include" a power MOSFET, as suggested by Fairchild.¹

AOS has accused Fairchild of infringing three patents: U.S. Patent Nos. 5,767,567 ("the '567 patent"); 5,907,776 ("the '776 patent") and 5,930,630 ("the '630 patent"). AOS is entitled to discovery on the devices that arguably incorporate the following features of its patents: (1) an integrated circuit with two or more subcontact areas that each have more than one lead wire attached to them (the '567 patent); (2) a device where the body region is formed adjacent to a trench, with a source region formed within the body region and an implant in the body region of the same conductivity type as the source (the '776 patent); (3) a MOSFET transistor with a body region formed by at least three implants (the '630 patent)². It requires no claim construction to determine that each

¹ On at least two occasions, Fairchild Corporation ("Fairchild") has asked AOS to clarify the meaning of "power MOSFET-based devices." When AOS refused to provide a further definition, Fairchild offered a definition of any device that "includes" a power MOSFET. AOS has not yet agreed to this definition. Declaration of Harry F. Doscher In Support Of AOS's Motion to Compel Responses to Interrogatories and Production of Documents and Things ("Doscher Decl."), ¶8, Ex. G; Declaration of Igor Shoiket In Support of Fairchild Semiconductor Corporation's Memorandum in Opposition to AOS's Motion to Compel Responses to Interrogatories and Production of Documents ("Shoiket Decl."), ¶2, Ex.1.

² The interrogatories and document requests that AOS has propounded only cover the '567 patent and the '776 patent. However, when the parties discussed AOS's definition of "Accused Fairchild

Continued on the next page

1 of these characteristics is an **essential** feature of AOS's asserted patents. Therefore, the Court should
 2 adopt the definition of "Accused Devices" that Fairchild proposed to AOS during meet and confer
 3 process, as follows:

4 The term "Accused Fairchild Device" shall mean any device which
 5 includes a power MOSFET made, used, offered for sale, or imported
 6 into the United States by Fairchild that comprises one or more of the
 7 following:

8 (a) any IC that includes a source contact area that is divided by at
 9 least one gate runner into two or more subcontact areas, and wherein
 10 each of the subcontact areas is connected to a lead-frame by more than
 11 one lead-wire; and/or

12 (b) devices made by a method in which a body region is formed
 13 adjacent to a trench, a source region is formed in the body region, and an
 14 implant is made into the body region of the same conductivity type as
 15 the source and which is other than an implant used to form the source;
 16 and/or

17 (c) MOSFET transistors having a body region formed through three
 18 dopant implants.

19 Doscher Decl., ¶13, Ex. K.

20 As set forth below, this definition fairly reflects the coverage of the AOS patents and will
 21 allow AOS to receive the discovery it needs in this case without unduly burdening Fairchild to
 22 produce irrelevant documents. AOS's demands that Fairchild produce manufacturing and design
 23 documents for every trench MOSFET and for every integrated circuit package manufactured by or for
 24 Fairchild (including packages with a single source **contact** area (*not* subdivided by gate runners into
 25 "subcontact areas" as required by the patent)), should be rejected. Fairchild respectfully requests the
 26 Court to deny AOS's motion to compel.

27 **II. BACKGROUND**

28 On July 30, 2007, AOS served its first set of interrogatories and document requests on
 Fairchild. In the interrogatories and document requests, AOS defined the "Accused Fairchild Device"

Continued from the previous page

Devices," both parties included a definition for the '630 patent as well. Fairchild assumes that AOS
 will serve discovery requests regarding the '630 patent at some point in the case.

1 as:

2 [A]ny power MOSFET-based device made, used, sold, offered for sale,
3 or imported by Fairchild, including without limitation, the devices
4 identified on Fairchild's web site as Power Modules, Switches, Power
5 Controllers, Power Drivers, Transistors, TRIACs, Voltage Regulators,
Application based products (Audio, Video, Lighting, Motor Drivers and
USB), Interface, Filters, and Temperature Management and further
including:

6 (a) any IC that includes a source contact area that is connected to a
lead-frame by more than one lead-wire; and/or

7 (b) any trench MOSFET; and/or

8 (c) any other devices identified by AOS in the course of the
litigation as infringing asserted AOS Asserted Patent (sic).

9
10 Doscher Decl., ¶¶ 2 & 3, Exs. A & B.

11 Fairchild objected to the definition as vague and ambiguous, overly broad, unduly burdensome
12 and oppressive, since, by inclusion of paragraphs (b) and (c) alone, the definition covered Fairchild's
13 entire power MOSFET line, an extraordinary number of Fairchild products, without any regard to their
14 relevance to AOS's asserted patents.

15 AOS subsequently served Preliminary Infringement Contentions and Supplemental
16 Preliminary Infringement Contentions ("PICs") that were of no help in clarifying what products are
17 accused. AOS identified eight products that allegedly infringe either the '567 patent or the '776
18 patent. AOS provided reverse-engineering data for only one of those device for each patent, but
19 accused "all other Fairchild products employing a **corresponding** design." AOS provided no
20 information about what it believes is a "corresponding design." Thus, it is unclear whether AOS's
21 definition of the "Accused Products" encompasses **all** of Fairchild's trench MOSFETs, as stated in
22 part (b) of the definition from AOS discovery requests, or only trench MOSFETs with a
23 "corresponding design" to the one part that AOS analyzed for each patent.

24 On November 8, 2007, AOS proposed a new definition of the accused devices which was as
25 broad as its old definition, since it still included subpart (b):

26 The term "Accused Fairchild Device" shall mean any power MOSFET-
27 based device made, used, sold, offered for sale, or imported by Fairchild
including:

28 (a) any IC that includes a source contact area that is connected to a
lead-frame by more than one lead-wire; and/or

(b) any trench MOSFET;

(c) MOSFET transistors having a body region formed through two dopant implants; and/or

(d) any other devices identified by AOS in the course of the litigation as infringing asserted an AOS Asserted patent³. (sic)

Doscher Decl., ¶11, Ex. J.

In a November 12th teleconference, the parties discussed AOS's newly proposed definition and Fairchild's objections to it. The parties agreed that Fairchild would propose a revised definition of "Accused Fairchild Devices" on November 13th and that the parties would have a teleconference on that same day to discuss Fairchild's proposal. Shoiket Decl., ¶3, Ex. 2. The next day, as promised, Fairchild's counsel e-mailed a revised definition as follows⁴:

The term "Accused Fairchild Device" shall mean any device which includes a power MOSFET made, used, offered for sale, or imported into the United States by Fairchild that comprises one or more of the following:

(a) any IC that includes a source contact area that is divided by at least one gate runner into two or more subcontact areas, and wherein each of the subcontact areas is connected to a lead-frame by more than one lead-wire; and/or

(b) devices made by a method in which a body region is formed adjacent to a trench, a source region is formed in the body region, and an implant is made into the body region of the same conductivity type as the source and which is other than an implant used to form the source; and/or

(c) MOSFET transistors having a body region formed through three dopant implants.

Doscher Decl., ¶13, Ex. K.

³ In its motion, AOS has removed part (d) of its November 8, 2007 definition, but still includes parts (a)-(c). See Motion to Compel at 2.

⁴ When Fairchild proposed a revised definition of "Accused Fairchild Devices" on November 13, 2007, Fairchild specifically stated: "We reserve all our rights to object based on overbreadth, undue burden and oppressiveness with respect to this definition in the absence of an agreement between the parties regarding representative parts." Doscher Decl., ¶13, Ex. K.

1 This definition clearly encompasses the essential features of each of the AOS patents.
 2 Part (a) describes essential features of the '567 patent, part (b) describes essential features of
 3 the '776 patent and part (c) describes essential features of the '630 patent.

4 On November 13th, Fairchild arranged a telephonic meet and confer with AOS to
 5 discuss the newly proposed definition. In the teleconference, AOS's counsel stated that
 6 Fairchild's proposed definition of "Accused Fairchild Devices" was too narrow. Shoiket
 7 Decl., ¶3, Ex. 2. However, when Fairchild's counsel asked why the definition was too narrow,
 8 AOS was unable to articulate an answer and simply indicated that the meet and confer process
 9 had gone on too long and that AOS needed to "proceed to the next step that day" *Id.* Later
 10 that day, AOS filed the present motion to compel.⁵

11 In addition, Fairchild has proposed to AOS on numerous occasions, including the
 12 November 12th meet and confer, that the parties reach an agreement on representative parts.
 13 Shoiket Decl., ¶2, Ex. 1; Doscher Decl., ¶¶8 & 10, Exs. G & I. The agreement would consist
 14 of each party producing documents and information relevant to a select few devices from each
 15 family of devices that are all manufactured in the same way. This agreement would
 16 significantly reduce the costs of litigation on both parties. However, to date, AOS has not
 17 consented to a representative parts agreement.

18 **III. ARGUMENT**

19 **A. AOS's Definition Of "Accused Fairchild Devices" Is Vague, Ambiguous,** 20 **Overbroad And Not Reasonably Calculated To Lead To The Discovery Of** **Admissible Evidence**

21 District courts have the discretion to limit discovery, particularly when the probative
 22 value of the information is slight and the burden on the requested party is heavy. Federal Rule
 23 of Civil Procedure 26(b)(2); *Ricotta v. Allstate Ins. Co.*, 211 F.R.D. 622, 624-25 (S.D. Cal.
 24 2002); *See In re ATM Fee Antitrust Litig.* No. C 04-2676, 2007 WL 1827635, *5 (N.D. Cal.
 25 June 25, 2007); *See also Nugget Hydroelectric L.P. v. Pacific Gas & Electric Co.* 981 F. 2d

26
 27 ⁵ AOS's counsel failed to explain **why** it was necessary to file a motion to compel on that day, in the
 28 middle of meet-and-confer on the very issue that is the subject of the motion.

1 429, 438-39 (9th Cir. 1992). In *Nugget*, the Ninth Circuit upheld a magistrate judge's denial of
 2 a motion to compel. The court specifically placed the burden on the requesting party to show
 3 the relevance of the evidence:

The magistrate's conclusion that Nugget's request was unnecessarily
 burdensome and overly broad is based upon Nugget's failure to make a
 "specific showing that the burdens of production would be minimal and
 that the requested documents would lead to relevant evidence."

6 *Id.*

7 AOS has made no showing that Fairchild's burden of producing hundreds of
 8 documents regarding products that are not covered in any way by AOS's patents would be
 9 minimal and would lead to relevant and admissible evidence. In fact, AOS's definition of
 10 "Accused Fairchild Devices," as stated in its discovery requests, covers thousands of Fairchild
 11 power trench MOSFET devices without any regard as to whether these products incorporate
 12 any features relevant to the claims of AOS's patents. Providing information on potentially
 13 thousands of irrelevant devices would be unduly burdensome and is not reasonably calculated
 14 to lead to the discovery of admissible evidence. On the other hand, if AOS's definition is
 15 limited to the devices that have a "corresponding design" to the one device that AOS tested for
 16 each patent, Fairchild is left to guess what AOS considers to be corresponding. This is
 17 inappropriate. *See InterTrust Technologies Corp. v. Microsoft Corp.*, 2003 WL 23120174, *2
 18 (N.D.Cal. 2003) ("Nor can Microsoft be expected to guess which versions of its products
 19 InterTrust believes to have the software modules that infringe its software patents.").

20 Furthermore, AOS's broad discovery requests regarding products that have no
 21 relevance to the claims of AOS's patents are impermissible according to pertinent case law. In
 22 *Caliper Technologies, Corp. v. Molecular Devices Corp.*, 213 F.R.D. 555, 558 (N.D. Cal.
 23 2003), plaintiff Caliper Corporation ("Caliper") accused defendant Molecular Devices
 24 Corporation's ("MDC") IMAP kits of infringing Caliper's asserted patents. Caliper sought
 25 discovery on documents beyond the scope of the accused IMAP kits. Caliper argued that it
 26 sought the additional discovery because it "want[ed] to know if MDC is selling other products
 27 which infringe its patent besides the IMAP kits." *Id.* The Court denied Caliper's request for
 28

1 the broader range of documents, stating that “a party may not obtain documents in order to
2 discover whether it has a cause of action.” *Id.*

3 The *Caliper* case is directly on point. AOS has given no explanation as to why it
4 believes that “any trench MOSFET” (meaning Fairchild’s entire product line of trench
5 MOSFETs) is accused, why it is entitled to discovery on devices that are completely irrelevant
6 to the claims of the asserted patents, or what features of the accused designs it believes are
7 “corresponding,” and therefore its discovery requests are fatally overbroad and unduly
8 burdensome. AOS may not use discovery in this case to determine whether it has a cause of
9 action. *Id.*

10 Additionally, the definition that AOS has proposed for “Accused Fairchild Devices” is
11 vague, ambiguous and unintelligible. For example, AOS uses the term “power MOSFET-
12 based device.” However, it is unclear what this term means. Fairchild has asked AOS
13 numerous times to explain what it means for a device to be “based on a power MOSFET.” To
14 date, AOS still has not answered this question, most likely because it has no answer. If AOS
15 cannot explain its own definition, it should not be Fairchild’s responsibility to guess which of
16 its products are accused.

17 Each part of AOS’s definition covers products that are not relevant to the claims of the AOS
18 patents-in-suit. For example, the ‘567 patent concerns a method of packaging the semiconductor die,
19 and AOS’s definition requires a **source** contact area that is connected to a lead-frame by more than
20 one lead-wire. However, claim 7 of the ‘567 patent (the only asserted claim) requires a contact area to
21 be subdivided by gate runners into a plurality of (i.e. at least two) **sub**contact areas, each of which is
22 connected to a lead frame by more than one lead-wire. Part (a) of AOS’s definition includes products
23 that cannot be covered under any plausible interpretation of the one claim that AOS contends is
24 infringed.

25 Part (b) of AOS’s proposed definition is also overbroad. It requests information regarding
26 “any trench MOSFET,” essentially accusing Fairchild’s entire trench MOSFET product line,
27 regardless of whether it is covered by the ‘776 patent under any interpretation of that patent. AOS did
28 not invent the trench MOSFET. The ‘776 patent is directed to a specific trench MOSFET design. In

fact, Figure 1 of the ‘776 patent, which is labeled “Prior Art,” shows a typical prior art trench MOSFET design. As the title of the ‘776 patent states, it is directed to a specific **method** of reducing the threshold voltage of trench MOSFETs. Among other limitations, the patented method requires the use of an implant into the body region of the device adjacent to a source region. AOS definition does not take that key limitation into account. On the other hand, if it is AOS’s intent to only accuse trench MOSFETs that are of a “corresponding design” to the part that AOS reverse-engineered for its PICs, the definition is fatally flawed because AOS does not state what features of the design are “corresponding.”

Part (c) of AOS’s definition is simply inaccurate. The ‘630 patent covers a device formed by three dopant implants into the body region, not two dopant implants. Specifically, all of the asserted claims of the ‘630 patent require at least three implants. *See* claim 1 of the ‘630 patent, steps (c), (d) and (f), Shoiket Decl., ¶ 6, Exh. 5.

AOS’s PICs give absolutely no support for its broad definition of “Accused Fairchild Devices” either. In its PICs, AOS accused eight products that allegedly infringe either the ‘567 patent or the ‘776 patent. However, AOS’s PICs accuse unidentified Fairchild devices beyond those eight by stating that “[all] other Fairchild products employing a corresponding design” are accused of infringement. AOS never gives a definition of the words “corresponding design,” not even in its motion papers. Indeed, AOS even admitted in a letter to Fairchild that it did not believe that it had to prove “reasonable similarity” of the accused products to other Fairchild products in the first place: “The Federal or Local Rules do not require ... AOS to comb through Fairchild’s product catalogue and, before any discovery, separately justify why every Accused Fairchild Device is ‘reasonably similar’ to one of the non-exclusive representative products within AOS’s Preliminary Infringement Contentions (PICs).” Doscher Decl., ¶9, Ex. H. AOS is wrong. Although the scope of discovery can be broader than the accused products listed in the PICs themselves, AOS can only obtain discovery on products that are reasonably similar to the accused products. *See Epicrealm Licensing, LLC v. Autoflex Leasing, Inc.*, 2007 WL 25080969 *3 (E.D. Tex. 2007). However, AOS has not provided any explanation in its PICs as to which Fairchild products are reasonably similar to the eight accused products. Simply stating that any product with a “corresponding design” is also accused does not

suffice. *See InterTrust Technologies Corp.*, 2003 WL 23120174, at *2 (“Nor can Microsoft be expected to guess which versions of its products InterTrust believes to have the software modules that infringe its software patents.”). AOS’s PICs give Fairchild no guidance on its infringement position or the types of devices it is accusing.

B. Fairchild’s Proposed Definition Is Reasonable And Should Be Adopted

Fairchild’s proposed definition is proper in light of the claim language of the ‘567 patent⁶, the ‘776 patent⁷, and the ‘630 patent⁸. With regard to the ‘567 patent, a proper definition of the accused device would include “any IC that includes a source contact area that is divided by at least one gaterunner into two or more subcontact areas, each of which is connected to a lead-frame by more than one lead-wire.” *See* claim 7 of the ‘567 patent, Shoiket Decl. ¶4, Ex. 3.

With regard to the ‘776 patent, Fairchild’s definition will properly include devices made by a method in which a body region is formed adjacent to a trench, a source region is formed in the body region, and an implant is made into the body region of the same conductivity type as the source and which is other than an implant used to form the source. *See* claim 1 of the ‘776 patent, Shoiket Decl. ¶5, Ex. 4.

⁶ The ‘567 patent is entitled: “Design Of Device Layout For Integration With Power MOSFET Packaging To Achieve Better Lead Wire Connections And Lower On Resistance.” The ‘567 patent relates generally to the process of packaging power MOSFET devices, lead wires are typically formed onto a contact area of the device for making connections from the contact area to the pins on the package (which then serve as means for connecting the device with other devices). ‘567 patent, col. 1:28-30. Shoiket Decl., ¶4, Ex. 3.

⁷ The ‘776 patent is entitled “Method Of Forming A Semiconductor Structure Having Reduced Threshold Voltage And High-Punch-Through Tolerance.” The ‘776 patent relates generally to “MOSFET ... power devices having reduced threshold voltage and high punch-through tolerance formed by the process of impurity concentration compensation.” ‘776 patent, col. 1:7-11. Shoiket Decl., ¶5, Ex. 4.

⁸ The ‘630 patent is entitled: “Method For Device Ruggedness Improvement And On-Resistance Reduction For Power MOSFET Achieved By Novel Source Contact Structure.” The ‘630 relates generally to the cell structure and fabrication process of vertical power transistors. ‘630 patent, col. 1:9-10. Shoiket Decl., ¶6, Ex. 5.

1 The '630 patent covers a device with three dopant implants into the body region.
 2 Fairchild's definition makes this exact statement.

3 The definition proposed by Fairchild will provide AOS with information that is
 4 reasonably calculated to lead to the discovery of admissible evidence. Any evidence beyond
 5 that definition is not covered by AOS's patents and therefore, will not lead to admissible
 6 evidence.

7 **IV. CONCLUSION**

8 For these reasons, AOS respectfully requests that the Court deny AOS's Motion to
 9 Compel Responses to Interrogatories and Production of Documents.

10
 11 DATED: November 27, 2007

Respectfully submitted,

12
 13
 14 By: /s/Igor Shoiket

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